Supreme Court, U.S.
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No. 01-541

IN THE
Supreme Court of the United States

ACCUSCAN, INC.,

Petitioner,

v.

XEROX CORPORATION,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

RESPONDENT'S BRIEF IN OPPOSITION

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QUESTION PRESENTED

Should the Court overturn the decision below where the Federal Circuit did not apply the "complete bar" approach to the doctrine of prosecution history estoppel announced in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabuskiki Co., Ltd.*, 234 F.3d 558, 574-75, 56 U.S.P.Q.2d 1865, 1877 (Fed. Cir. 2000), but instead applied the uniform precedent of this Court and the Federal Circuit that a patentee cannot use the doctrine of equivalents to capture subject matter that was specifically surrendered to the Patent Office in order to obtain allowance of its claims?

PARTIES TO THE PROCEEDING BELOW

The parties are Petitioner, AccuScan, Inc., and Respondent, Xerox Corporation.

Xerox Corporation identifies the following company as a publicly held company that owns 10 percent or more of the stock of Xerox: State Street Bank and Trust Co., a subsidiary of State Street Corporation, 225 Franklin Street, Boston, Mass. 02110.

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STATEMENT OF THE CASE

I. INTRODUCTION

In *AccuScan v. Xerox*, the Federal Circuit prevented AccuScan from arguing that its claims mean one thing during the process of procuring a patent, but yet another during litigation. This decision was supported—and indeed compelled—by the well established precedent of this Court and the Federal Circuit. *See e.g., Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 30-34 (1997); *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1173, 26 U.S.P.Q.2d 1018, 1024-25 (Fed. Cir. 1993).

Nevertheless, AccuScan argues that the Federal Circuit's decision in the instant case relied on the "complete bar" to asserting the doctrine of equivalents set forth in the Federal Circuit's *en banc* decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabuskiki Co., Ltd.*, 234 F.3d 558, 574-75, 56 U.S.P.Q.2d 1865, 1877 (Fed. Cir. 2000), *cert. granted*, 121 S. Ct. 2519 (U.S. Jun. 18, 2001) (No. 00-1543). AccuScan makes this argument in a blatant attempt to bootstrap the above captioned case to this Court's decision to grant certiorari in *Festo*. Yet, contrary to AccuScan's assertions, this case has absolutely nothing to do with the "complete bar" approach adopted by *Festo*.

In *Festo*, the Federal Circuit held that once a narrowing amendment has been made to a claim element for reasons of patentability, there arises a "complete bar" to invoking the doctrine of equivalents to this claim element. *Id.* at 569. This "complete bar" is applied irrespective of "the breadth of the [Examiner's] rejection, the closeness of the

prior art, the manner of the applicant's remarks and amendments, or the nature of the technology." *Id.* at 600 (Michel, J., dissenting-in-part).

In the instant case, however, the Federal Circuit did *not* apply the "complete bar" of *Festo,* but instead carefully considered the breath of the Examiner's rejection, the closeness of the prior art, the nature of the applicant's remarks, and the nature of the technology. In so doing, the Federal Circuit specifically examined the prosecution of the application that led to AccuScan's U.S. Patent No. 3,952,144 ("the '144 patent"), and found that in order to overcome a prior art reference cited by the Examiner, AccuScan unambiguously argued that its claims did *not* cover certain subject matter. The Federal Circuit then found that the undisputed evidentiary record demonstrated that the four accused Xerox devices practiced the very subject matter that AccuScan disavowed in order to obtain allowance of its claims.

Accordingly, the Federal Circuit correctly held that there could be no literal infringement since AccuScan's claims could not be interpreted to cover subject matter specifically disavowed during prosecution. Likewise, and far from applying the "complete bar" of *Festo*, the Federal Circuit held that based on the clear and unambiguous surrender of the very subject matter that was practiced by Xerox's accused devices, AccuScan was estopped, under the doctrine of prosecution history estoppel, from arguing that Xerox's accused devices infringed under the doctrine of equivalents.

Therefore, as AccuScan's first two questions presented to this Court are erroneously premised upon the

Federal Circuit's application of the *Festo* "complete bar," this Court should preserve its limited judicial resources and deny certiorari as to these questions.

AccuScan's third question, concerning the right to a jury trial, also rests on a fundamental mischaracterization of the Federal Circuit's decision. Contrary to AccuScan's assertions, the Federal Circuit did not "summarily" apply prosecution history estoppel to preclude application of the doctrine of equivalents. Instead, the Federal Circuit carefully examined the prosecution history and determined that AccuScan surrendered during prosecution the very subject matter that constituted Xerox's accused devices. This decision was supported by well-established precedent and does not in any way implicate the Seventh Amendment right to a jury trial. Accordingly, certiorari should be denied for this question as well.

II. THE TECHNOLOGY UNDERLYING ACCUSCAN'S '144 PATENT

In order to fully understand the Federal Circuit's opinion, it is useful to understand the technology at issue. The technology claimed by AccuScan's '144 patent "calibrates" the scanning portion of a facsimile machine. In transmitting the contents of a document to another facsimile machine, the facsimile machine described by the '144 patent specification scans a document with a beam of light. A photosensor senses the light reflected off the document and generates an electrical signal—designated "a video input signal"— that varies according to the amount of reflected light. This video input signal (referred to as "V_{in}"), however, is subject to undesirable "voltage offsets" and "gain

variations" that reduce the accuracy of the image produced by the receiving facsimile machine.

To maintain the accuracy of the image sent to the receiving facsimile machine, the machine described by the '144 patent automatically "calibrates" the video input signal to eliminate these "voltage offsets" and "gain variations." The circuit responsible for carrying out the calibration of the video input signal is designated the "Automatic Background and Contrast Control unit" ("the ABC circuit").

The ABC circuit performs its task by measuring the input signal obtained from scans of known samples of black and white. Like finding North and South on a map before determining one's position, the ABC circuit uses the values obtained from these known samples of black and white to calibrate the video input signals obtained from a subsequent scan of a document.

To obtain the values for white and black, the ABC circuit scans a "calibration strip." The calibration strip has a black portion and a white portion. The ABC circuit obtains a black sample—designated V_b—from the black part of the calibration strip and obtains a white sample—designated V_w—from either the white part of the calibration strip or from the background of the document itself. The circuit stores these values during the entire scan of the document.

The ABC circuit then calibrates the video input signal using these white and black values. It does so by converting the video signal obtained from the scan of the document to values that are always—despite any voltage offsets or gain variations—between 1 and 0. The patent also discloses that the values between 1 and 0 can be multiplied by a

predetermined constant called a "scale factor" to obtain values between 0 and the scale factor.

According to claim 1 of the '144 patent, the claimed apparatus makes this conversion by obtaining "the difference in magnitude [between the] input signal and [the] first sample *divided* by the difference in magnitude [between the] first and second samples."[1] In the ABC circuit described by the '144 patent, the first sample is black and the second sample is white.

The operation of the ABC circuit can be best illustrated by assuming the following hypothetical values: the scan of the first or black sample (V_b) provided a value of 2 volts; the scan of the second or white sample (V_w) provided a value of 6 volts; and the scan of the video input signal (V_{in}) provided a value of 3 volts.

The ABC circuit subtracts the first sample from the video input signal (V_{in} -V_b) providing a value of 1 volt (3-2=1). It also subtracts the first sample from the second sample (V_w-V_b) providing a value of 4 volts (6-2=4). Next, it divides—utilizing a "divide circuit"— the 1 volts by the 4 volts (V_{in}-V_b/ V_w-V_b) to obtain a value of .25 (1/4=.25)—a value between 0 and 1. Finally, the ABC circuit multiples the value obtained by 10 (the scale factor) to obtain values between 0 and 10. Thus, in the above example, the final value for the calibrated video signal is 2.5 (10 x .25=2.5). In this way, the ABC circuit eliminates voltage offsets that distort the reproduced image received by the receiving facsimile machine.

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[1]The subject matter of claim 17 is substantially similar to claim 1, although presented in the format of a method claim.

III. ACCUSCAN SURRENDERED COVERAGE OF XEROX'S ACCUSED DEVICES DURING PROSECUTION TO DISTINGUISH OVER KRALLINGER

A. AccuScan Was Forced To Severely Limit Its Claims During Prosecution

Like the device described by the '144 patent, U.S. Patent No. 3,761,610 (referred to as "Krallinger") also disclosed a facsimile system that calibrates a video input signal using known samples of black and white. As set forth below, AccuScan was forced to drastically limit the scope of its claims to overcome this reference.

Krallinger calibrates a video input signal by obtaining a black sample from a "black band" that precedes each line of text of the document and by obtaining a white sample from the background of the document itself. The device then uses the black and white samples to calibrate the voltage of a video input signal so that it varies only between 0 for black signals to a predetermined constant (designated "V_r") for white signals. Like the scale factor described by the '144 patent, V_r represents the maximum value produced after calibration.

However, unlike the ABC circuit disclosed by the '144 patent, Krallinger *does not store a white sample that is held during the entire scan of the document*. Instead, Krallinger obtains the value for the white sample for each line of text of the document and immediately converts it into a "*gain value*." (App. at 5.) This gain value is equal to the predetermined constant (V_r) divided by the difference

between the white sample and the black sample (V_r/ V_w-V_b). It is the "gain value"—and not the white sample—that is stored and multiplied by the difference between the video input signal and the value stored for the black sample (V_{in}-V_b). (App. at 5.)

Therefore, using the numbers set forth above, Krallinger would subtract the black value from the white value (V_w-V_b) to obtain the value 4 (6–2=4). Accordingly, the gain value (V_r/V_w-V_b) would be 2.5 (10/4 =2.5). The Krallinger device then multiplies the gain value (2.5) by the video input signal minus the value for the black sample (V_{in}-V_b or 3-2=1) to obtain the value 2.5 (2.5 x 1=2.5) for the normalized video signal—the exact same value produced by the claimed ABC circuit.

Moreover, as a consequence of multiplying the difference of the input signal and the black sample (V_{in}-V_b) by the gain value (V_r /V_w-V_b), the Krallinger device does not perform division during the scan of the document. (App. at 5-6.)

During prosecution, the Examiner rejected the claims of the '144 patent corresponding to the ones at issue as obvious over Krallinger. (App. at 2.) In its response, AccuScan pointed out that Krallinger does *not* store a white sample for the entire scan of the document, but instead, converts the value obtained for the white sample to a *gain value*. (App. at 5-6.) As claim 1 of the '144 patent requires three elements: (1) a means for storing a first sample, (2) a means for *storing a second sample*, and (3) a means for "*continually combining*" the input signal with the first and *second samples* to obtain a normalized or corrected signal, AccuScan argued that Krallinger did not fall within the

scope of the '144 patent's claims because it did not store a second or white sample—element (2)—and thus could not possibly "continually" combine the input signal with the first and second samples to obtain a normalized signal—element (3). (App. at 7-8, emphasis added.)[2]

More specifically, AccuScan argued that in the claimed ABC circuit, "[t]he black and white samples *are held throughout the complete scanning of the complete document page*" and then *"continuously combined"* to form the output signal. (App. at 4, emphasis added.) "It is clear, however, that *a white sample is not stored or utilized during this operating period* [by the Krallinger device]." (App. at 6, emphasis added.) "Krallinger . . . may show a device which stores a sample of the black value of the input signal *but [it does] not store a second sample of the white value of the input signal*." (App. at 7, emphasis added.)

Therefore, because Krallinger did not actually store a second sample but only calculated "a gain value," AccuScan argued Krallinger had "no apparatus which is operable during the operating period for 'combining said input signal and said first and second samples . . . .'" (App. at 7, emphasis in original.) Indeed, to emphasize the claimed invention's differences over Krallinger, and contrary to AccuScan's assertions to this Court, AccuScan specifically *amended* claim 1 to indicate that claimed device "continually" combined the input signal with both the first and second samples. (App. at 7-8.)

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[2]AccuScan distinguished claim 18, the claim corresponding to method claim 17, on essentially the same basis. (App. at 11.)

In addition to not storing a second sample, AccuScan further distinguished Krallinger by arguing that while its claims required a *division operation* during the scan of the document, the input signal in *Krallinger* "is multiplied by the temporarily fixed gain [the gain value]" (App. at 5-6, emphasis in original.) In Krallinger, "no divide circuit is utilized, the operation being merely that of setting the gain of the amplifier 24 [the gain value] and then using this fixed gain . . . as a multiplying . . . unit." (App. at 6.)

Thus, in order to obtain allowance of claims 1 and 17 of the '144 patent, AccuScan specifically argued that these claims did *not* cover circuits that (1) do not store and hold a white sample during the entire scan of the document, (2) do not continually combine the input signal with the black and white samples during the entire scan of the document, and (3) do not utilize a divide circuit during the scan of the document to calibrate the input signal.

B. Xerox's Accused Devices

The undisputed evidence in the record established that the four Xerox products AccuScan accused of infringement, the DocuTech Publishing System, the 5775 Color Copier, the 7017/20/21 facsimile machine, and the SA4 Scanner, (1) do not store and hold a white sample during the scan of the entire document, and (2) do not continually combine the input signal with the black and white samples during the entire scan of the document. (AccuScan Pet. App. at 13a.)

In particular, the expert testimony at trial demonstrated that rather than storing a white sample, the DocuTech system and the 5775 copier—like Krallinger—

calculate a gain value before the scanning period and store and use this gain value to calibrate the video signal during the entire scan of the document. Likewise, the evidence demonstrated that the 7017/20/21 facsimile machine and the SA4 scanner also do not store a white sample, but instead store the difference between the black and white samples during the scan of the document. (*Id.*)

Moreover, the undisputed evidence at trial indicated that neither the DocuTech system nor the 5775 color copier utilized a divide circuit during the entire scan of the document to calibrate the input signal. (AccuScan Pet. App. at 9-10a.) Again like Krallinger, the DocuTech system multiplies—not divides—the difference between the input and the black sample by a gain value to calibrate the signal during the scan of the document. (*Id.*) In the same way, the 5775 copier subtracts logarithms and does not utilize a divide circuit. (*Id.*)

IV. THE FEDERAL CIRCUIT'S DECISION

After a jury awarded AccuScan millions of dollars for Xerox's alleged infringement of the '144 patent, Xerox appealed to the Federal Circuit, arguing that the claims in question, as a matter of law, could not be interpreted to cover Xerox's accused devices based on the positions taken by AccuScan during prosecution. The Federal Circuit agreed.

In reaching its decision, the Federal Circuit applied well established precedent and correctly held that "[a]rguments and amendments made during the prosecution of the '144 patent limit the interpretation of the claim terms so as to exclude any interpretation that was disclaimed during prosecution." (AccuScan Pet. App. at 5a.)

Based on the statements discussed above, the court found that during prosecution, "AccuScan explicitly disclaimed coverage of any device performing the mathematical calculation yielding [the video output signal] by something other than a divide circuit." (AccuScan Pet. App. at 9a.) The court then explained that it was "uncontested" that neither the DocuTech nor the 5775 copier utilize a divide circuit to calculate the video output signal. (*Id.*) In response to AccuScan's position that the mathematical operations performed by the DocuTech and 5775 copier constituted a form of division and were thus covered by the claim, the Federal Circuit explained that while AccuScan may be "mathematically correct" in the abstract, AccuScan "explicitly disclaimed such an interpretation during prosecution." (*Id.* at 10a.)

In addition to limiting its claims to circuits that performed division during the scan of the document, the Federal Circuit further relied on the statements set forth above concerning the continual storage of a white sample. The Federal Circuit explained that during prosecution, "AccuScan distinguished the '144 patent over other devices which did not store a sample of the white signal," including devices (such as Krallinger) that "use the white sample signal to create a related value [a gain value] which is then stored." (*Id.* at 12a.) "[T]he prosecution history makes it clear that such a mathematically related value [a gain value] is not equivalent to the '144 patent's storage of a separate white sample signal." (*Id.*) The court further stated that "a distinguishing feature of the '144 patent is the continual storage and continuous use of the separately stored black and white samples throughout the scanning of an entire document." (*Id.*) Accordingly, the Federal Circuit held that

the claims at issue "require continuous 'storing' of the [white sample] value in its pure form, and continuous 'combining' of this value throughout the scanning of the document." (*Id.* at 13a.)

The Federal Circuit then examined the evidentiary record and determined that "[t]he diagrams of the operation of the Xerox devices *created by AccuScan* make it clear that the four different Xerox product lines at issue only temporarily store the white sample . . . in its pure form." (*Id.*, emphasis added.) Moreover, the court found that there was "no dispute that this is a correct characterization of the accused Xerox products." (*Id.*) Thus, because the white sample is only stored temporarily, "it cannot be used continuously as required by the '144 patent claims . . . in light of the prosecution history." (*Id.*) Accordingly, the Federal Circuit held that there was no literal infringement as AccuScan's claims could not be interpreted to cover Xerox's accused devices.

Furthermore, based on this clear and unambiguous surrender of subject matter during prosecution, the Federal Circuit also held that AccuScan could not now use the doctrine of equivalents to capture such subject matter. (*Id.*) In reaching this decision, the Federal Circuit cited *Festo Corp. v. Shoketsu Kinzoku Kabushiki Co. Ltd.*, 234 F.3d 558, 564, 56 U.S.P.Q.2d 1865, 1869 (Fed. Cir. 2000) ***and*** *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1173, 26 U.S.P.Q.2d 1018, 1024-25 (Fed. Cir. 1993), a case conspicuously absent from AccuScan's discussion of the Federal Circuit's opinion.[3]

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[3] AccuScan omitted *Texas Instruments* from the quotation from the Federal Circuit's opinion that appears on page 19 of AccuScan's petition.

REASONS FOR DENYING THE WRIT

I. THE FEDERAL CIRCUIT DID NOT APPLY THE "COMPLETE BAR" ANNOUNCED IN *FESTO*

This Court should not expend its extremely limited resources by examining a patent infringement case where the Federal Circuit applied the uniform precedent of this Court and the Federal Circuit. These decisions correctly hold that one cannot use the doctrine of equivalents to capture subject matter that was surrendered during prosecution in order to obtain allowance of the claims. *See e.g., Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 30-34 (1997) (explaining that the doctrine of prosecution history estoppel limits the application of the doctrine of equivalents where the patentee has made "amendments . . . to avoid prior art, or otherwise . . . address[ed] a specific concern—such as obviousness—that arguably would have rendered the claimed subject matter unpatentable."); *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 981, 52 U.S.P.Q.2d 1109, 1115 (1999) ("Prosecution history estoppel prevents operation of the doctrine of equivalents from expanding a claim limitation to include subject matter surrendered during the patent's prosecution."); *EMI Group N. Am., Inc. v. Intel Corp.*, 157 F.3d 887, 897, 48 U.S.P.Q.2d 1181, 1188 (Fed. Cir. 1998) (holding that a process will "avoid the reach of the doctrine of equivalents . . . if the asserted variation had been relinquished during prosecution."); *Southwall Technologies,*

AccuScan's failure to cite this case is significant because, as set forth below, in *Texas Instruments*, the Federal Circuit did not apply the "complete bar" approach to prosecution history estoppel.

Inc. v. Cardinal IG Co., 54 F.3d 1570, 1579, 34 U.S.P.Q.2d 1673, 1679 (Fed. Cir. 1995) ("Thus, prosecution history estoppel limits the range of equivalents . . . by preventing recapture of subject matter surrendered during prosecution of the patent."); *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1173, 26 U.S.P.Q.2d 1018, 1024 (Fed. Cir. 1993) (cited by the Federal Circuit below) ("Prosecution history estoppel will not allow the patentee to extend the range of equivalents . . . to subject matter relinquished during prosecution of the patent."); *Haynes Int'l, Inc. v. Jessop Steel Co.*, 8 F.3d 1573, 1577, 28 U.S.P.Q.2d 1652, 1655 (Fed. Cir. 1993) ("The essence of prosecution history estoppel is that a patentee should not be able to obtain, through litigation, coverage of subject matter relinquished during prosecution.").

In an effort to overcome this overwhelming authority, AccuScan's first two questions and corresponding arguments distort the Federal Circuit's opinion by alleging that the Federal Circuit relied on the "complete bar" approach to prosecution history estoppel set forth in *Festo*. (*See e.g.*, AccuScan Pet. at i, 4-5, 8, 11-13.) AccuScan does this in a blatant attempt to bootstrap this case to the Court's decision to grant certiorari in *Festo*.

AccuScan's argument, however, must be rejected because in the instant case, the Federal Circuit simply did *not* apply the "complete bar" approach set forth in *Festo*. Under the "complete bar" approach adopted in *Festo*, once a narrowing amendment has been made to a claim element for reasons of patentability, there arises a "complete bar" to invoking the doctrine of equivalents to this claim element. 243 F.3d at 569. The "complete bar" is applied irrespective of "the breadth of the [Examiner's] rejection, the closeness of

the prior art, the manner of the applicant's remarks and amendments, or the nature of the technology." *Id.* at 600 (Michel, J., dissenting-in-part). The "complete bar" approach should be contrasted to the "flexible bar" approach rejected by the *en banc* court in *Festo*. Under this "flexible bar," courts examine the particular amendment made during prosecution and determine whether the accused "device [was] similar to the prior art that had provoked the amendment." *Id.* at 572. Only in those cases where the device was similar would a court estop the patentee from relying on the doctrine of equivalents. *Id.*

In the instant case, the Federal Circuit clearly did *not* rely on the *Festo* "complete bar," but instead—consistent with the above authority—carefully considered the arguments made by AccuScan and then examined whether Xerox's accused devices constituted the sort of devices disavowed by AccuScan during prosecution. After determining that Xerox's accused devices constituted the very subject matter that was explicitly disclaimed during prosecution, the court held that AccuScan was estopped from arguing that such devices infringed under the doctrine of equivalents. The Federal Circuit specifically stated "[f]or purposes of infringement under the doctrine of equivalents, the patentee is also bound by the clear and unmistakable *surrender of the structure employed by Xerox*." (AccuScan Pet. at App. 13a, emphasis added.) If the Federal Circuit had applied a "complete bar," it would not have had to comment on Xerox's accused devices at all.

AccuScan, however, argues that the Federal Circuit relied solely on *Festo* in reaching its decision. (AccuScan Pet. at 12, 19.) Yet, contrary to AccuScan's assertions, the Federal Circuit relied on *two cases* to estop AccuScan from

utilizing the doctrine of equivalents. (AccuScan Pet. App. at 13a.) A careful review of these cases further demonstrates that the Federal Circuit did not apply a "complete bar."

First, the Federal Circuit cited *Festo*, 234 F.3d at 564, 56 U.S.P.Q.2d at 1869. While this citation provides the linchpin for AccuScan's entire argument that the Federal Circuit applied a "complete bar," AccuScan conveniently ignores the fact that while the page of the *Festo* opinion cited by the Federal Circuit does provide a summary of the answers to the *en banc* questions posed to the Federal Circuit, the page also provides a general background to the history and application of the doctrine of prosecution history estoppel. 234 F.3d at 564. In explaining the doctrine, the Federal Circuit stated that"[a]ctions by the patentee, including claim amendments and arguments made before the Patent Office, may give rise to prosecution history estoppel," and that "[p]rosectuion history estoppel precludes a patentee from obtaining under the doctrine of equivalents coverage of subject matter that has been relinquished during the prosecution of its patent application." *Id.* (quoting *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc.*, 170 F.3d 1373, 1376-77, 50 U.S.P.Q.2d 1033, 1036 (Fed. Cir. 1999)). These statements in no way implicate the "complete bar," reflect well established precedent as set forth above, and were most likely the statements relied on by the Federal Circuit in the instant case, particularly as this case involves arguments advanced during prosecution in addition to actual amendments to the claim. Indeed, the concept of the "complete bar" approach *does not even appear on the page of the U.S.P.Q.2d version of Festo* (56 U.S.P.Q.2d at 1869) cited by the Federal Circuit. If the Federal Circuit was actually citing to the "complete bar" concept, this citation would be incorrect.

That the Federal Circuit was not relying on the "complete bar" aspect of *Festo* is further shown by the court's citation to *Texas Instruments*, 988 F.2d 1165, 1173, 26 U.S.P.Q.2d 1018, 1024-25 (Fed. Cir. 1993), a case decided seven years before *Festo*. In that case, the Federal Circuit stated that "prosecution history estoppel will not allow the patentee to extend the range of equivalents . . . to subject matter relinquished during prosecution" and that the "prosecution history to which we may look includes . . . representations made to the Examiner that the invention is patentable." *Id.* (citation omitted). The court then determined that during prosecution, the patentee argued that its claims were "patentable because of [an] *opposite*-side gating limitation" not taught by prior art. *Id.* at 1175 (emphasis added). After examining the technology at issue, the court found that the accused device did not use opposite side gating, but the *same* side gating surrendered by the patentee during prosecution. *Id.* at 1173. Accordingly, the Federal Circuit held that the patentee was estopped from arguing that the accused device infringed under the doctrine of equivalents. *Id.* at 1175. *Texas Instruments* represents the epitome of the "flexible bar" approach and further demonstrates the weakness of AccuScan's strained argument that the Federal Circuit applied the *Festo* "complete bar" in the instant case.

AccuScan also contends that the Federal Circuit applied a "complete bar," by arguing that it "summarily" disposed of the doctrine of equivalents issue with a single sentence without carrying out any analysis. (AccuScan Pet. at 4.) AccuScan states that the Federal Circuit "overstepped" precedent "when it forwent analysis of infringement under the doctrine of equivalents by relying solely on its analysis of

literal infringement." (AccuScan Pet. at 6.) These arguments, however, again represent a gross mischaracterization of the Federal Circuit's opinion.

While determinations of literal infringement and prosecution history estoppel are separate determinations, they are often made based on the same underlying facts. *See, e.g., Spectrum Int'l Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1380, 49 U.S.P.Q.2d 1065, 1070 (Fed. Cir. 1998) (using same factual analysis to demonstrate that there was no literal infringement or infringement under the doctrine of equivalents).

To determine literal infringement, courts first interpret the claims based on the claim language, the specification, and the prosecution history, and second, compare the properly interpreted claims to the accused device. *Markman v. Westview Instruments Inc.*, 52 F.3d 967, 976, 979, 34 U.S.P.Q.2d 1321, 1326, 1329 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996).

To determine whether a patentee is estopped from using the doctrine of equivalents, courts first determine whether the patentee surrendered subject matter during prosecution in order to obtain allowance of its claims, and second, examine whether the accused devices constituted the sort of subject matter surrendered by the patentee. *Texas Instruments*, 988 F.2d at 1173. Thus, while these analyses are separate, they both rely on the representations made to the Patent and Trademark Office during prosecution and an understanding as to the operation of the accused devices.

Here, after examining the prosecution history and the operation of Xerox's accused devices, the Federal Circuit

held that there could be no literal infringement. Based on these same very facts, the Federal Circuit was able to conclude that "[f]or purposes of infringement under the doctrine of equivalents, the patentee is also bound by the clear and unmistakable *surrender of the structure employed by Xerox*." (AccuScan Pet. App. at 13a, emphasis added.) AccuScan's assertion that the Federal Circuit "summarily" applied prosecution history estoppel ignores the detailed and comprehensive factual analysis undertaken by the court. AccuScan's implicit suggestion that the Federal Circuit needed to repeat this same exact factual analysis again in a section of the brief entitled "Prosecution History Estoppel" defies logic.

Accordingly, as AccuScan is simply wrong that the Federal Circuit applied the "complete bar" approach to prosecution history estoppel, this Court should deny certiorari on AccuScan's first two questions.

II. WELL ESTABLISHED AND UNIFORM PRECEDENT ESTABLISH THAT ARGUMENTS ADVANCED DURING PROSECUTION CAN CREATE AN ESTOPPEL

AccuScan argues that while the Federal Circuit in *Festo* only applied the "complete bar" to actual claim *amendments*, the Federal Circuit further departed from established precedent by applying a "complete bar" to *arguments* made during prosecution. (AccuScan Pet. at i.) AccuScan's assertion, however, can be rejected out of hand for the reasons discussed above, namely that the Federal

Circuit did not apply the "complete bar" of *Festo* in the case below.[4]

Furthermore, to the extent AccuScan contends that arguments made during prosecution cannot create an estoppel, well established and uniformly applied precedent clearly demonstrate the contrary. *Cortland Line Co. v. The Orvis Co., Inc.*, 203 F.3d 1351, 1360, 53 U.S.P.Q.2d 1734, 1739 (Fed. Cir. 2000) (holding that the patentee's statements during prosecution "evinc[e] a clear and unmistakable surrender"); *Elkay*, 192 F.3d at 981 (holding that "[a]rguments and amendments made to secure allowance of a claim . . . presumably give rise to prosecution history estoppel."); *Texas Instruments*, 988 F.2d at 1174 ("[u]nmistakable assertions made by the applicant to the Patent and Trademark Office . . . may operate to preclude the patentee from asserting equivalency."); *Spectrum*, 164 F.3d at 1380; *Haynes Int'l*, 8 F.3d at 1579.

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[4] Moreover, AccuScan did *amend* one of the claim elements that AccuScan later argued could encompass Xerox's accused devices. During prosecution, AccuScan specifically amended claim 1 to indicate that the claimed device "*continually*" combined the input signal with both the first (black) and second (white) samples. (App. at 8, emphasis added.) Accordingly, the Federal Circuit held that the claims at issue "require continuous 'storing' of the [white sample] value in its pure form, and *continuous 'combining' of this value throughout the scanning of the document.*" (AccuScan Pet. App. at 13a, emphasis added.) After finding that Xerox's accused devices only store the white sample temporarily, the Federal Circuit held that in Xerox's accused devices, the white sample value "cannot be used continuously as required by the '144 patent claims" and thus cannot infringe either literally or under the doctrine of equivalents. (*Id.*)

Accordingly, AccuScan's argument that the instant case constitutes an expansion of the Federal Circuit's decision in *Festo* must be rejected.

III. THE FEDERAL CIRCUIT'S DECISION DOES NOT IMPLICATE THE SEVENTH AMENDMENT RIGHT TO A JURY

AccuScan argues that by applying a *Festo* "complete bar" and "summarily" estopping the application of the doctrine of equivalents, the Federal Circuit violated the Seventh Amendment to the Constitution. (AccuScan Pet. App. at 17-21.) AccuScan's argument, however, is seriously misplaced for several reasons.

First, as stated above, the Federal Circuit did *not* apply the *Festo* "complete bar" approach but instead examined Xerox's accused devices to determine whether AccuScan has surrendered such subject matter during prosecution. Second, as also stated above, the court *did* not "summarily" estop AccuScan but instead performed a detailed analysis of the facts underlying Xerox's prosecution history estoppel defense.

Third, while AccuScan correctly states that the application of the doctrine of equivalents is a question of fact (AccuScan Pet. at 18), the application of prosecution history estoppel has long been considered a question of law. *Spectrum*, 164 F.3d at 1380; *Wang Labs., Inc. v. Mitsubishi Elec. Am., Inc.*, 103 F.3d 1571, 1577-78, 41 U.S.P.Q.2d 1263, 1269 (Fed. Cir. 1997); *Mark I. Marketing Corp. v. Donnelley & Sons Co.*, 66 F.3d 285, 291, 36 U.S.P.Q.2d 1095, 1100 (Fed. Cir. 1995); *Southwall*, 54 F.3d at 1579;

Texas Instruments, 988 F.2d at 1173; *LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 867 F.2d 1572, 1576, 9 U.S.P.Q.2d 1995, 1998 (Fed. Cir. 1989). AccuScan's assertions to the contrary are contradicted by this precedent and should be rejected. *Cf. Markman*, 52 F.3d at 987 (analogizing the review of a patent's prosecution history to statutory interpretation).

Indeed, the very "questions" that AccuScan argues should have been submitted to the jury demonstrate the fallacy of AccuScan's position. For example, AccuScan contends that the following question should have been submitted to the jury:

> Under the doctrine of equivalents, is a circuit that divides X by Y and then multiplies the resulting value by a constant the same as a circuit that divides a constant by Y and then multiplies the resulting value by X?

(AccuScan Pet. at 21.) This question, however, is exactly the sort of question that should *not* have been presented to the jury because, during prosecution, AccuScan specifically argued that a circuit that divides by the difference between the black and white samples and multiplies by a scale factor is completely different and patentably distinct from a circuit that multiplies by a gain value (scale factor divided by the difference between the white and black samples). AccuScan cannot simply back away from these clear and unambiguous representations, which provided the basis for the patentability of its claims, because it now finds such statements inconvenient.

Thus, as a matter of law, the Federal Circuit correctly found that because AccuScan argued that division by the difference between the black and white samples was different from multiplication by a gain value, it was estopped from now arguing to the jury in the context of litigation that these two operations were equivalent. This is the very essence of prosecution history estoppel as it has been applied for years. *Haynes Int'l*, 8 F.3d at 1579.

Finally, AccuScan never raised before the Federal Circuit its novel argument that the doctrine of prosecution history estoppel is a factual question to be decided by the jury, rather than a question of law for the court. This Court does not "[o]rdinarily . . . decide questions not raised or resolved in the lower court[s]." *Taylor v. Freeland & Kronz*, 503 U.S. 638, 646 (1992)(citing *Youakin v. Miller*, 425 U.S. 231, 234 (1976)). Accordingly, there is no reason to even reach this issue.

CONCLUSION

For the foregoing reasons, Xerox urges the Court to deny AccuScan's petition for a writ of certiorari in its entirety.

Respectfully submitted,

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APPENDIX

APPENDIX A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	CARL RAYMOND KOLKER	:	
		:	Group Art
Serial No.:	511,422	:	No. 233
Filed:	October 2, 1974	:	Examiner Britton
For:	METHODS AND APPARATUS FOR AUTOMATIC BACKGROUND AND CONTRAST CONTROL	:	

Beverly Hills, California 90212
October 14, 1975

Hon. Commissioner of Patents
and Trademark
Washington, D.C. 20231

AMENDMENT

Sir:

Responsive to the Office Action dated June 20, 1975, please amend the above-identified application as follows:

IN THE SPECIFICATION:

At page 3, line 27, after "application", please insert - - now U. S. Patent No. 3,843,839 - -;

Page 13, line 28, before "to", insert - - , now U. S. Patent No. 3,843,839 - -;

Page 14, line 16, after "312,114", insert - - , now U. S. Patent No. 3,843,839 - -;

IN THE CLAIMS:

Claim 1, line 11, after "for", insert - - continually - -;

Claim 10, line 3, after "connected", insert - - in shunt connection - -;

CANCEL CLAIM 17.

REMARKS

Patent Numbers have been supplied in the specification as required by the Examiner. Correction of the drawings Fig. 1, have been authorized in a separate Letter to the Office Draftsman as required by Examiner and by Item 7 in the Notice of Informal Patent Drawings. In addition, in the correction to the drawings, the input line designated EOF to Unit 41b has been shortened so as to use the same convention with respect to EOF inputs as was used with Unit 43b, i.e., that these are all reception points for the signal EOF from Unit 71.

In the Office Action, the Examiner rejected all of the claims in this case, Claims 1 through 19, under 35 U.S.C. §103, as obvious over the Krallinger, et al. reference in view of the Johnson reference. This rejection is respectfully traversed for reasons which will be set forth fully below.

In order to clarify the reasons for traversal of the rejection, it is desirable to first briefly describe the nature and structure of the Automatic Background and Contrast Control system of the present invention as contrasted with the Krallinger, et al. and Johnson devices. The ABC unit of the present invention includes both a sequencing circuit and a sampling and signal processing circuit and is specially adapted to be used in a facsimile transmitter or receiver. In such operation with a facsimile transmitter, the transmitter develops a ramp deflection voltage which deflects the transmitter scanning element in a calibration scan across a calibration strip which has first an extended black area and then an extended white area established thereon. The sequencing circuit of the ABC unit is responsive to the transmitter's ramp deflection voltage to produce a first sampling signal when the ramp voltage reaches a predetermined magnitude corresponding to the scanning of the black area of the calibration strip and produces a second sampling signal when the ramp voltage reaches a second predetermined magnitude corresponding to the scanning of the white area of the calibration strip.

In the sampling and signal processing functions the ABC unit is operated under the control of these two separated first and second sampling signals. In response to the first sampling signal, the ABC unit stores in the input capacitor of an operational amplifier a sample of the video signal then being produced by the transmitter scanning element, this sample of the video input signal thus being representative of the black shade of the calibration strip then being traversed during the calibration scan. In response to the second sampling signal, the ABC unit stores in the input capacitor of a second operational amplifier a second sample of the video input signal corresponding to the white shade or value of the calibration strip being scanned. Thus, at the

completion of the calibration scan separate black and white representing samples of the input video signal are held stored in the input capacitors of their respective operational amplifiers, which produce corresponding output voltage signals V_b and V_w representative of the voltage magnitudes of the black and white samples. The black and white samples are held stored throughout the complete scanning of the complete document page and both of them are utilized continuously throughout this period to control the automatic background and contrast control operations of the ABC unit. In such operation the signals V_w and V_b are continuously combined in an operational amplifier to continuously produce a signal representative of the magnitude $V_w - V_b$. In addition, the received video input signal (designated V_{in}) is continuously combined in an operational amplifier with the signal V_b to produce an output signal representative of the magnitude $V_{in} - V_b$. The two output signals $V_{in} - V_b$ and $V_w - V_b$ are continuously combined in a divide circuit to produce a final output signal V_0, which has a magnitude representative of the quantity $\frac{V_{in} - V_b}{V_w - V_b}$. This represents a fully normalized and gain corrected signal which is corrected both for undesired voltage offsets and biases and for undesired gain variations. It is clear that the ABC unit of the present invention is characterized by fully automatic acquisition of separate black and white samples of the video signal by the continual storage of the separate black and white samples throughout the subsequent scanning and transmission of a document, and by the continuous use during such period of the separately stored black and white samples to continuously correct the video signal received during the scanning of the document. Moreover, the ABC unit of the present invention is further characterized by automatic production and sequencing of the separate black and white sampling signals in response to the corresponding

magnitudes of the ramp deflection voltage of the transmitter during the calibration scan.

Referring now in contrast to the Krallinger, et al. device, the Krallinger, et al. patent shows a drum-type facsimile transmitter receiver in which a black line or bar is provided the length of the drum along the left-hand edge of the document to provide a black calibration area at the beginning of each line. The white margin of the document immediately following the black bar provides the white calibration area. A sync signal is generated at the beginning of a line by a mirror and light combination which is aligned with the black bar and flashes a burst of light into a detector. This single sync signal is used as a sampling signal to store the corresponding black signal in the input capacitor of a controllable gain video amplifier to thereby set the reference level of the video amplifier. The immediately following white signal is not sampled or stored but instead, because of its appearance immediately following the black signal, is used in a servo operation to vary the gain of the controllable amplifier so that the amplified white signal is equal to a preset reference voltage V_r. This amplification or gain level once obtained, is held throughout the complete line by the cumulative charge stored in an error capacitor 52 which represents the cumulative level of the error signals produced in the slewing operations of the gain control servo of the amplifier. Capacitor 52 is a storage element but it does not store a sample of the white signal, and, moreover, a sample of the white signal is not stored at any place or position in the Krallinger, et al. circuit.

In the further operation of the Krallinger, et al. device, during the scanning of the line the input video signal, background corrected by the black signal stored in capacitor 20, is multiplied by the temporarily fixed gain of the

amplifier 24 throughout the remainder of the line so as to yield a background and gain compensated signal. It is clear, however, that a white sample is not stored or utilized during this operating period, and moreover, no divide circuit is utilized, the operation being merely that of setting the gain of the amplifier 24 and then using this fixed gain amplifier 24 as a multiplying or amplifying unit throughout the completion of the single line scan period. At the completion of each line scan the Krallinger, et al. circuit is reset by the sync pulse and repeats its calibration and operation functions during each successive line scan.

This operation of recalibrating at each line of the scan in the Krallinger, et al. device presents its own peculiar problems. If the black line or the white margin varies in shade along its length, this will result in different shading and contrast characteristics along the length of the document page being transmitted by the Krallinger, et al. transmitter.

The Johnson reference is merely cumulative to the Krallinger, et al. reference. The Johnson reference relates to an automatic gain control circuit for reading video signals recorded on a magnetic tape or other recording medium. The system assumes that successive black and white representing calibration signals have been inserted in the video recording in the blank or retrace area and these signals are used to set the gain of the following amplifier. As in the Krallinger, et al. device, the black signal is stored in a capacitor 55 to set a base voltage reference for the operation of the device. However, the immediately following white signal is not in any way sampled or stored but is instead used to control the setting of the gain of the variable amplifier of the device to bear a fixed relation to a reference bias. Thus, the ensuing white sample is not sampled or stored in any manner and is not available during the ensuing operation. What is used

during the ensuing operation is the stored black signal and the fixed gain of the variable amplifier which is held at a fixed gain level by integrated error charge on an error condensor 79. As in the Krallinger, et al. device, this charge on error condensor 79 represents the integral of the error values of the amplifier gain servo and is not a sample of the white signal.

It is, moreover, clear referring to the Krallinger, et al. and Johnson references that their circuitry and functions are so dissimilar that neither could be incorporated or combined with the other without destruction of both the primary and secondary reference. There is no teaching whatsoever for such combination and such combination could only be done by way of hindsight and through destruction of the operating circuitry of these references.

Referring now to the claims and keeping in mind the aforedescribed distinctions between the structure and function of the present invention and that of the references. It is clear referring to Claim 1, that although the references do show the element A of the combination ("means for storing a first sample of said input signal"), the references do not show the second element B of the combination ("means for storing a second sample of said input signal when said input parameter is at its second magnitude"). Thus, Krallinger, et al. or Johnson may show a device which stores a sample of the black value of the input signal but they do not store a second sample of the white value of the input signal. Similarly, referring to element C of the combination, since neither Krallinger, et al. nor Johnson store a second sample of the input signal, they have no apparatus which is operable during the operating period for "combining said input signal and said first and second samples to continually produce . . .". Moreover, in the present amendment in order

to further emphasize the above-described distinctions, Claim 1 has been amended at line 11, so that the last named means is recited as "continually combining said input signal and said first and second samples".

Claim 2 is dependent upon Claim 1 and is similarly allowable. Moreover, Claim 2 introduces as a claimed element of the combination a facsimile transmitter having document areas which are scanned therein to produce the black and white signals and the subsequent variable magnitude signal representative of the shade of document area scanned in the transmitter. It is noted that the secondary Johnson reference does not deal at all with a facsimile transmitter but instead depends upon the availability of recorded video signals on a magnetic tape.

Claim 3 is dependent upon Claim 2 and further distinguishes over the references by reciting the automatic sequencing operation of the present ABC systems in which the facsimile transmitter generates the ramp deflection voltage to deflect the scanning element across the document and the first sample of the input signal is automatically stored in response to the ramp voltage reaching a predetermined magnitude corresponding to the scanning of the first area of the document. No such automatic sampling operation is shown in the Krallinger, et al. reference in response to the magnitude of the ramp deflection voltage of the facsimile transmitter. In the Krallinger, et al. reference, the sampling signal for the black signal is produced by the flash of light from the sync mirror.

In Claim 4 a similar and second apparatus is recited for storing the second sample of the input voltage in response to a second magnitude of the ramp deflection voltage corresponding to the scanning of the second area. This entire

structure and operation is entirely absent in the applied references.

Claims 5, 6 and 7 are dependent upon Claim 4 and are similarly allowable.

Referring to Claim 8, this claim fully distinguishes over the applied references by its recitation of "a second circuit means responsive to said first and second samples for continually producing a second different signal representative of their difference in magnitude" and further distinguishes in its recitation of "divider circuit means responsive to said first and second different signals for producing said output signal representative of the quotient of their magnitudes". This structure and operation is entirely absent in the references which do not have a divider circuit and do not continually produce a difference signal representative of the difference of the first and second samples.

Claim 9 is dependent upon Claim 3 and is similarly allowable. Claim 10 is dependent upon Claim 1 and is distinguished over the references in the same manner.

In the present amendment in order to further distinguish Claim 10, the words "in shunt connection" have been provided at line 3 to clarify the nature of the connection of the storage capacitor to the input of the operational amplifier. Such connection of the storage capacitor is not found in the references.

Claim 11 is a dependent claim which includes most of the aforesaid described distinguishing elements including the production of both separate first and second sampling signals in response to corresponding voltage magnitudes of

the horizontal ramp deflection voltage and the storing of the first and second samples in response to the first and second sampling signals, all in combination with a facsimile transmitter which generates a ramp deflection voltage to deflect its canning element in the calibration scan across first and second calibration areas of corresponding first and second shades of darkness. Thus, Claim 11 is directed to the automatic sequencing of the sampling and hold operations and is clearly distinguished over the references.

Independent Claim 13 is similar in scope to Claim 1 and is distinguished in the same manner by its recitation of its second and third means. The references lack any means for storing a second sample of the video input signal or producing a second signal representing said stored second sample, and further lacks any means for continually combining said video input signal with said first and second signals during scanning of said source document areas. Claim 13 is dependent upon Claim 12 and is similarly allowable. Claim 14 is also dependent upon Claim 12 and is similarly allowable. Moreover, in the receiver of the Krallinger, et al. reference, the successive black and white signals applied to the receiver are merely arbitrary locally generated reference signals and have nothing whatsoever to do with the black and white signals generated by the calibration scan across the document as would be required by parent Claim 12.

Claim 15 which is dependent upon Claim 12 is similarly allowable and additionally describes in detail the manner in which the first and second sampling signals are generated in response to the successive voltage magnitudes of the ramp deflection voltage. Claim 16 is dependent upon Claim 12 and similarly distinguishes over the references.

Claim 18 is a method claim which recites separate storage of first and second samples and production of first and second signals representative of the stored first and second samples. Claim 18 further recites combining said first and second signals to produce a second output signal having a magnitude representative of their difference in magnitude and still further recites combining said first and second output signals. As has been previously discussed none of the references have any means for storing a second sample or producing a second signal representative of the stored second sample or combining the first and second signals to produce a second output signal representative of their difference in magnitude. Thus, method Claim 18 is clearly distinguished over the references.

Claim 19 is dependent upon Claim 18 and is similarly distinguished.

In view of the foregoing analysis of the distinguishing features of the claims in relation to the applied references, favorable action is respectfully solicited.

Respectfully submitted,

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